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Hans Beer

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HANS BEER, KLAUS FORESE, LOTHER KNOECHELMANN,
and DUANE B. PIECHOCKI

Appeal 2010-000331
Application 10/051,459
Technology Center 1700

Decided: June 11, 2010

Before EDWARD C. KIMLIN, PETER F. KRATZ, and MARK NAGUMO,
Administrative Patent Judges.

KRATZ, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1, 2, and 15-17. We have jurisdiction pursuant to 35 U.S.C. § 6. Oral arguments were presented on June 8, 2010.

Appellants' claimed invention is directed to an improved process of making a no through flow diagnostic cellulosic membrane having a refined surface. The standard process includes using phase inversion in an evaporation process to prepare a feedstock membrane (crude or partially dried membrane) from a cellulosic membrane casting solution. The improvement involves removing filter dust impurities from this partially dried feedstock membrane by mechanical brushing prior to drying and during a water rinse of at least one side of the resulting feedstock membrane (*see*, e.g., Spec. 3, 4, and 9-11; Fig. 3).

Claim 1, the sole independent claim on appeal, is illustrative and reproduced below:

1. A process for producing a no-through-flow diagnostic cellulose membrane having a refined surface, comprising the steps of:

(a) preparing a feedstock membrane from a cellulose membrane casting solution by phase inversion in an evaporation process, and

(b) prior to drying the resulting feedstock membrane, removing filter dust impurities by mechanical brushing while rinsing with water from at least one side of said partially-dried feedstock membrane from which the solvent is evaporated in the evaporation process of step (a).

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Beer	5,628,960	May 13, 1997
Hasebe	5,826,129	Oct. 20, 1998

Claims 1, 2, and 15-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Beer alone or, in the alternative, Beer taken in view of Hasebe.

We reverse both prongs of the alternatively stated rejection for substantially the reasons set forth by Appellants in the Appeal Brief (*see*, e.g., App. Br. 16-19).

It is well settled that the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. In the present appeal, the record reflects the Examiner has not discharged this burden, a shortcoming which represents a dispositive issue we resolve in Appellants' favor.

It is not disputed that Beer teaches "a process of producing a cellulose acetate or nitrate membrane by casting directly on a film," as found by the Examiner (Ans. 4). However, the Examiner misreads and/or mischaracterizes the disclosure of Beer at column 3, lines 45-54, by asserting that this disclosure teaches "the desirability to remove dust from the membrane prior to drying the membrane" (Ans. 4). This portion of the disclosed Example 1 of Beer teaches a method of minimizing filter dust as part of a formed membrane by removing non-membrane-forming substances responsible for filter dust from some of the raw materials (cellulose derivatives) used in preparing such a membrane. The Examiner points to no other disclosure in Beer that is directed to removing filter dust from a formed membrane as claimed, nor do we find any such disclosure in Beer.

Thus, Beer does not teach or suggest mechanical brushing while rinsing after preparing a feedstock membrane from a casting solution via phase inversion but prior to drying the membrane, as required by all of the appealed claims (*see* claim 1).

Hasebe discloses a resist coating and development system used in semiconductor manufacture as being part of the conventional related prior art to Hasebe (col. 1, ll. 13-15). The prior art system described in Hasebe includes a brush cleaning unit (2) and a rinsing unit (3) as part of the wafer processing system (col. 1, ll. 15-19; Fig. 1). Hasebe is primarily directed to a substrate processing system, such as a wafer processing system including a substantially vertical rotating shaft, as an object conveying means, about which conveying means the process chambers of the processing system are located.

Dr. Hans Beer testifies that the presently claimed method defies the common expectation of those skilled in the art that the membrane would be destroyed by trying to remove dust from a crude (partially dried) membrane (Beer Declaration, Exhibit 1, paras. 10-12).

Concerning the Examiner's assertion about the well-known use of brushing and/or rinsing to remove dust (Ans. 4), this assertion has not been substantiated by the Examiner with credible evidence to show that such well-know subject matter assertion applies in the case of removing filter dust from a membrane prior to drying that is formed from a cellulose membrane casting solution by phase-inversion in an evaporation process, as the here-claimed process requires.

Moreover, the Examiner has not established that the disparate disclosure of Hasebe would have taught or suggested mechanical brushing while rinsing a membrane similar to the membrane as formed by Beer to one of ordinary skill in the art at the time of the invention, much less established that Hasebe would have taught or suggested interposing a brushing step,

while rinsing, for a feedstock membrane prior to drying, as required in Appellants' claimed process.

Consequently, we reverse the Examiner's obviousness rejection for failure to present a prima facie case of obviousness. Because we reverse on this basis, we do not reach the evidence of unexpected results presented in rebuttal in the second Declaration of Dr. Beers (App. Br., Exhibit 2).

CONCLUSION/ORDER

The Examiner's decision to reject claims 1, 2, and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over Beer alone or, in the alternative, Beer taken in view of Hasebe is reversed.

REVERSED

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